Introduction to Knovel http://app.knovel.com

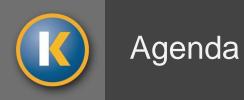


Lionel New – I.new@elsevier.com March 2017



Know More. Search Less.

Knovel

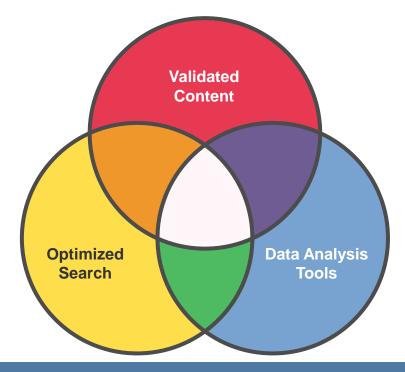


- About Knovel
- What content is in Knovel (AIT)
- Who is using Knovel for Teaching & Learning
- Key Features & Highlights
 - Search Optimized for Engineers and Scientists
 - Data Search & Data Analysis Tools integrated into Engineering Workflow
 - Interactive Tools Graph Digitizer & Equation Plotter
- My Knovel ToGo Mobile Tablet Reader



Knovel is a **web-based application** integrating **technical information** with **analytical & search tools**

which drive innovation and deliver answers engineers can trust



Knovel delivers answers engineers can trust and ultimately drives

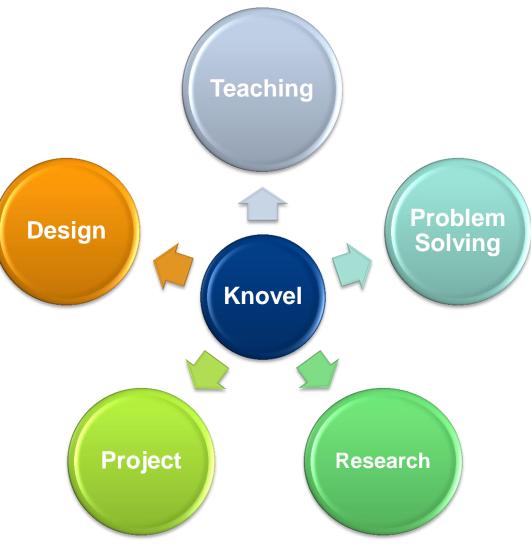
innovation.



About Knovel

Multiple applications to fit all the needs of academic institutions

Widely embraced by worldwide academic institutions to enhance innovation and design activities and achieve teaching excellence so as to produce successful engineers





Broadest Quality Content from Relevant Sources

-fer hike	Broadest Content from Diversified Sources
ASCE ASM PRESS	 Established, accepted science sourced from 130+recognized societies & publishing partners
OXFORD SME	 Stringent selection process supported by Editorial Advisory Board



Over 130 trusted and diversified content sources





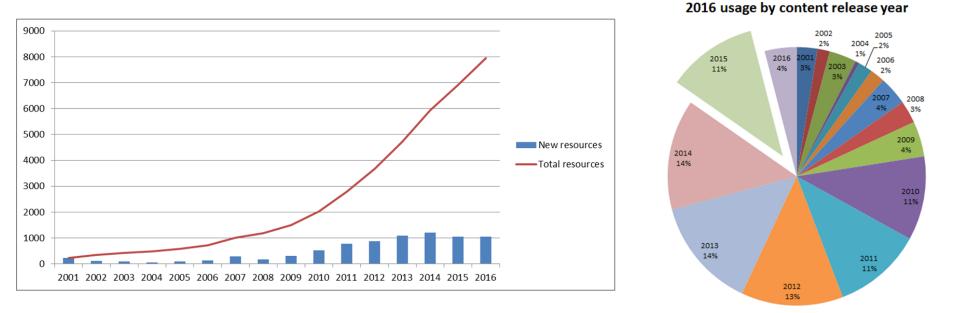
Depth and breadth of engineering topics to allow discovery and problem solving

- Adhesives, Coatings, Sealants & Inks
- Aerospace & Radar Technology
- Biochemistry, Biology & Biotechnology
- Ceramics & Ceramic Engineering
- Chemistry & Chemical Engineering
- Civil Engineering & Construction Materials
- Composites
- Computer Hardware Engineering
- Earth Sciences
- Electrical & Power Engineering
- Electronics & Semiconductors
- Engineering Management & Leadership
- Environment & Environmental Engineering
- Fire Protection Engineering & Emergency Response
- Food Science
- General Engineering & Project Administration
- Industrial Engineering & Operations Management

- Manufacturing Engineering
- Marine Engineering & Naval Architecture
- Mechanics & Mechanical Engineering
- Metals & Metallurgy
- Mining Engineering & Extractive Metallurgy
- Nanotechnology
- Nondestructive Testing & Evaluation
- Oil & Gas Engineering
- Optics & Photonics
- Pharmaceuticals, Cosmetics & Toiletries
- Plastics & Rubber
- Process Design, Control & Automation
- Safety & Industrial Hygiene
- Software Engineering
- Sustainable Energy & Development
- Textiles
- Transportation Engineering
- Welding Engineering & Materials Joining



• Content is Key (1 of 2)



- 39% of 2016 usage came from content added in last 3 years (2013-15)
- 66% of 2016 usage came from content added in last 5 years (2011-15)



• Content is Key (2 of 2)

Region	Number of Partners	% of Titles	% of Usage (2016 YTD)
EU	44	27%	19%
APAC	6	2%	1%
NOAM	80	71%	79%

2017 New References

- Addition of 850 new titles, 11% growth
- Key partners are targeted

- Content sourced from outside N. America accounts for 29% of all content on Knovel and 20% of all usage
- In 2016, 40% of new resources added from partners outside N. America

2017 Data & Equations

- Addition of 600 interactive equation worksheets , 40% growth
- 1.7M data points add/update
- Total 63M data points



Search Optimized for Engineers



Broadest Content from Diversified Sources

- Established, accepted science sourced from 130+recognized societies & publishing partners
- Stringent selection process supported by Editorial Advisory Board

Search Optimized for Engineers

- Finds data, hidden in tables, graphs, and equations
- "Understands" engineering language
- Allows numeric range search





A proven problem solving resource for Industry

- Hundreds of thousands of Engineers Worldwide use Knovel
- 74 of Fortune 500 companies
- "Top 10" engineering firms in Oil & Gas, Specialty Chemical, Aerospace & Defense and Engineering Design & Construction





- Nearly 500 Institutions in 50+ countries
- 20 of Top 24 US Engineering Schools & 31 of the top 50 World's Best Universities

for Mechanical, Aeronautical, & Manufacturing Engineering

• Embraced by academic institutions of all sizes.





Personalized insights for engineers

Knovel is the solution to deliver deep engineering insights using trusted content; through machine learning and analytics

> New UX/I to drive awareness to MyKnovel and Data Knovel

Advanced technology for better search results

Sustain usage through smartphone app Robust admin/CC tools to engage and manage users

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Search Optimized for Engineers



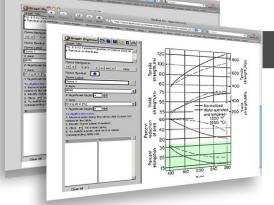
Broadest Content from Diversified Sources

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Search Optimized for Engineers

- Finds data, hidden in tables, graphs, and equations
- "Understands" engineering language
- Allows numeric range search





Interactive non-text content come "alive"

- More than 100,000 interactive tables, graphs and equations
- Customize and manipulate data as easily as sorting a spreadsheet
- Data Export preserves format and documents data source

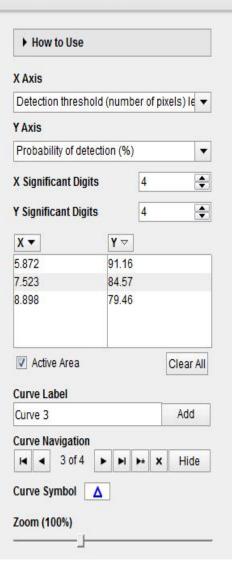


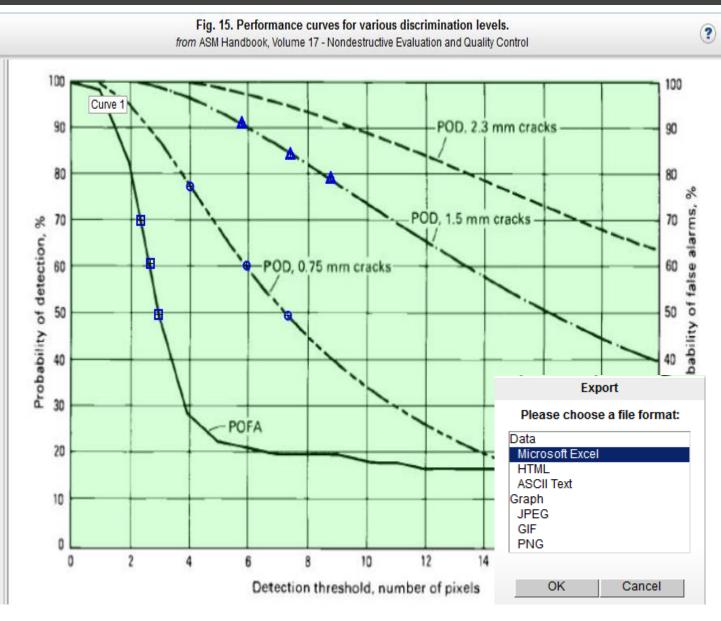
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Interactive Graph

() Knovel[®] Graph Digitizer



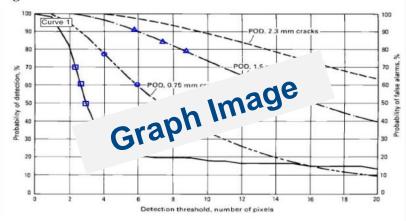




Interactive Graph

	А	В	С	D
1	Fig. 15. Performance curves	for various discrimination lev	vels.	
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3				
4				
5	Curve 1			
6	Detection threshold (numbe	Probability of detection (%)		
7	4.111	77.54		
8	6.037	60.73		
9	7.440	50.09		
10				
11		osoft Excel ^{70.31}		
12	Curve 2	oft EXU		
13	Detection threshold	oSOL(%)		
14	MICI	70.31		
15		61.16		
16	3.038	50.30		
17				
18				
19	Curve 3			
20	Detection threshold (numbe			
21	5.872	91.16		
22	7.523	84.57		
23	8.898	79.46		
24				
25				
26	ASM Handbook, Volume 17 -		and Qualit	y Control
27	Copyright © 1989 ASM Intern	national		

Fig. 15. Performance curves for various discrimination levels.



ASM Handbook, Volume 17 - Nondestructive Evaluation and Quality Control Copyright © 1989 ASM International

Curve 1	
Detection threshold (number of pixels) left	Probability of detection (%)
4.111	77.54
6.037	60.73
7.440	50.09

Curve 2		
Detection threshold (number of	o1.16	tection (%)
2.433	Imag-	
2.763 nata	01.16	
3.038	50.30	

Curve 3	
Detection threshold (number of pixels) left	Probability of detection (%)
5.872	91.16
7.523	84.57
8.898	79.46

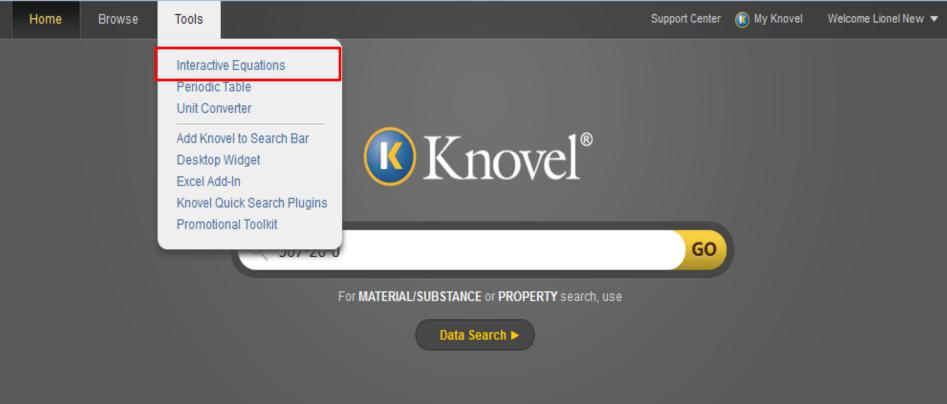


Interactive Table

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		molecular 🔻	name 💌	synonyms 🔻	CAS No. 🔻	molecular veight	temperature, ▼ T _{min} (K)	temperature, ▼ T _{max} (K)	temperature, ▼ T (K)	specific heat ▼ @ T _{min} (kJ/ (kg K))	specific heat ▼ @ T (kJ/(kg K))	specific heat ▼ @ T _{max} (kJ/ (kg K))	code 👻	A
	Σ	Al ₂ FeO ₄	aluminate, iron (II)		12068-49-4	173.804	298.15	303.15	300.65	0.684	0.684	0.684	2	0.
	Σ	AsFeH₄O ₆	arsenate, iron (III) dihydrate	arsenate, iron (III) dihydrate arsenate of	10102-49-5	230.793	298.15	303.15	300.65	0.721	0.721	0.721	2	0.'
	Σ	Fe	iron	ancor en 80/150 armco pzh2m carbony	7439-89-6	55.845	100	1000	550	0.217	0.553	0.975	1	-0
	Σ	AsFe	iron arsenide	arsinidyneiron iron arsenide	12044-16-5	130.767	298.15	303.15	300.65	0.426	0.426	0.426	2	0
	Σ	BFe	iron boride		12006-84-7	66.655	298.15	303.15	300.65	0.588	0.588	0.588	2	0.:
	Σ	Br ₂ Fe	iron (II) bromide	dibromoiron FeBr2 ferrou	7789-46-0	215.653	298.15	1500	899.075	0.372	0.434	0.496	1	0.:
	Σ	Br ₂ FeH ₁₂ O ₆	iron (II) bromide hexahydrate	iron (II) bromide hydrate dibromoiron hydr	13463-12-2	323.743	298.15	303.15	300.65	0.775	0.775	0.775	2	0.'
	Σ	Br₃Fe	iron (III) bromide	ferric bromide iron (III) bromide tribromoiron	10031-26-2	295.557	298.15	303.15	300.65	0.356	0.356	0.356	2	0.:
	Σ	CFeO ₃	iron (II) carbonate	blaud's mass carbonic acid, iron (2+	563-71-3	115.853	298.15	303.15	300.65	0.693	0.693	0.693	2	0.)
	Σ	C₂H₄FeO₅	iron (II) oxalate	ferrous oxalate dihvdrate	6047-25-2	179 893	298 15	303 15	300.65	0 898	0 898	0 898	2	> ° `
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Interactive Equations



New Knovel promotional resources for your library! Download ready-to-go promotional and training materials to use within your library, and to share with students and faculty.

Click <u>here</u> to access the toolkit now or use the Tools menu at the top of this page! Knovel Overview | Finding Actionable Answers to Everyday Engineering Problems

Find out the best ways to search for answers through Knovel's 40+ content areas and how to leverage interactive tools.

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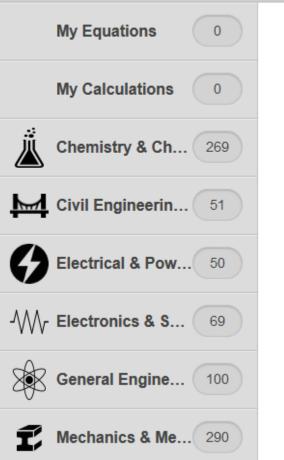
Thank you to <u>Elsevier</u>, for helping provide Knovel access to the top 53 finalists of the Green and Sustainable Chemistry Challenge



Interactive Equations

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Solve problems easy and fast!

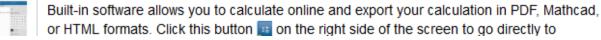
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(K) (R)	working examples in the subject areas of Chemistry and Chemical Engineering,
	Electronics and Semiconductors, General Engineering, Mechanics and Mechanical
	Engineering, Metals and Metallurgy, Oil & Gas, and many others that are being added
	daily.

[WATCH THE VIDEO]





• Progress Update: My Knovel To Go Smartphone App





iOS

Android



- ✓ NEW Smartphone app submitted for approval to iOS and Android app stores
- ✓ NEW Smartphone app on-track for Q1 delivery
- ✓ Tablet app updated and released



Explore Knovel

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A SEARCH-centric User Experience

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Knovel's Internal pdf Viewer

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ncel Search	as casein, depends on the ionic st Highlighting <i>milk fat</i> al amount of salt is needed	• •
	to solubilise proteins (salting-in), but too much salt leads to screening of excess charge, leading to agglomeration (salting-out). The main mineral in milk is calcium. About 8 wt% of the casein micelles is calcium phosphate (about 1.25% of skimmed milk powder is pure calcium). Intake of calcium is considered to be of importance for reduced risk of osteoporosis. Surprisingly, deficiencies remain, even in the Western world. Casein micelles are an ideal carrier of cations such as calcium (but also magnesium and all other insoluble salts), which is mainly present in the micelles in the form of phosphate crystals. These crystals are insoluble in water at neutral pH, but because they reside in hydrophobic pockets at the interior of the casein micelles, they are kept 'in solution'. Acidification leads to dissolution of the crystals. If milk is further enriched in calcium, considerable taste (soluble calcium causes bitterness and in-line fouling) and texture (insoluble calcium causes sandiness, sedimentation and wearing of homogenisers) issues can arise. Some new insights on the interaction between proteins and calcium have been gained over the past years, especially as a function of (reversible or cycled) pH (Canabady-Rochelle <i>et al.</i> , 2007; Raouche <i>et al.</i> , 2007, 2008).	
	9.2.6 Milk fat Normal fresh cow's milk contains only about 3.5% milk fat, depending on the cow breed. Milk fat, also known as butterfat, is composed of triacylg- lycerols (TAGs) containing a wide range of fatty acid moieties. The most	Shortcuts



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Design Enhancement

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Competent and Successful Engineer

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 - Optimized for engineers. Easily find data hidden in interactive tables, graphs, charts and equations that can be manipulated, analyzed and exported with citations.
- Knovel is An Asset for Teaching and Learning:
 - Helps faculty integrate technology into the classroom and teaching methods to achieve teaching excellence and meets the challenges of today's tech savvy students.
 - Professors can easily assign interactive study materials to their students to help keep them engaged.
 - Professors can use to identify supplementary readings, develop homework assignments based on a wide-array of real-world problems.
- Knovel Helps to Educate Competent, Competitive, Innovative & Successful Engineering Professionals
 - Students will prepare for a competitive workforce by using the same research tools and trusted information used by engineers at leading companies worldwide.

"[Knovel] has become the gold standard among its target user base, based on its ability to anticipate the needs of its users and serve them as quickly and efficiently as possible."

> - "STM E-Books: 2012 Market Size, Share, and Forecast" by Laura Ricci







Key Delivery Items	Delivery Dates
Content additions/updates	On-going monthly
Smartphone APP	March, 2017
New UX/I for Knovel website	August, 2017
New features to drive usage of Data and MyKnovel	August, 2017
Search improvements	August, 2017
New features for better user management	August, 2017
Simpler user registration and engagement	August, 2017
Additional capabilities across all areas Knovel π	December 2017



Thank you

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